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Demography and Family Planning

DEMOGRAPHY

- ▶ The scientific study of human populations, including their sizes, compositions, distributions, densities, growth, and other characteristics, as well as the causes and consequences of changes in these factors.

DEMOGRAPHY

- ▶ It focuses on three readily observable human phenomena:
 - Changes in population size (**growth or decline**)
 - **Composition** of the population and,
 - **Distribution** of the population.
- ▶ It deals with five demographic processes: **fertility, mortality, marriage, migration and social mobility.**

Demographic cycle

▶ Stage I: High Stationary

- Characterized by High birthrate and high death rate which cancel each other and population remains stationary. E.g. India till 1920.

▶ Stage II: Early Expanding

- Death rate begins to decline but birth rate remains unchanged as the result of improvement of health condition. E.g. many South Asian and African country currently.

Demographic cycle

- ▶ **Stage III: Late Expanding**
 - Death rate declines still further and the birth rate tends to fall resulting continuous grow of population. E.g. India has entered in this phase and China & Singapore are already in this phase.
- ▶ **Stage IV: Low stationary**
 - Characterized by low birth rate and low death rate resulting stationery population (Zero growth rate). E.g. Austria during 1980–85, UK, Denmark, Sweden 1980–85 GR: ,0.1)

Demographic cycle

▶ Stage V: Declining

- Population becomes to decline because birth rate is lower than the death rate. E.g. Germany and Hungary.



Growth Rate

- ▶ The number of persons added to (or subtracted from) a population in a year due to natural increase and net migration expressed as a percentage of the population at the beginning of the time period.

| Rating | Annual rate of growth % | Population doubling time in years |
|---------------------|-------------------------|-----------------------------------|
| Stationary pop | No growth | --- |
| Slow growth | <0.5 | >139 |
| Moderate growth | 0.5-1.0 | 139-70 |
| Rapid growth | 1.0-1.5 | 70-47 |
| Very rapid growth | 1.5-2.0 | 47-35 |
| Explosive growth >2 | 2.0-2.5 | 35-28 |
| | 2.5-3.0 | 28-23 |
| | 3.0-3.5 | 23-20 |
| | 3.5-4.0 | 20-18 |

World population trends

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TABLE 4.1

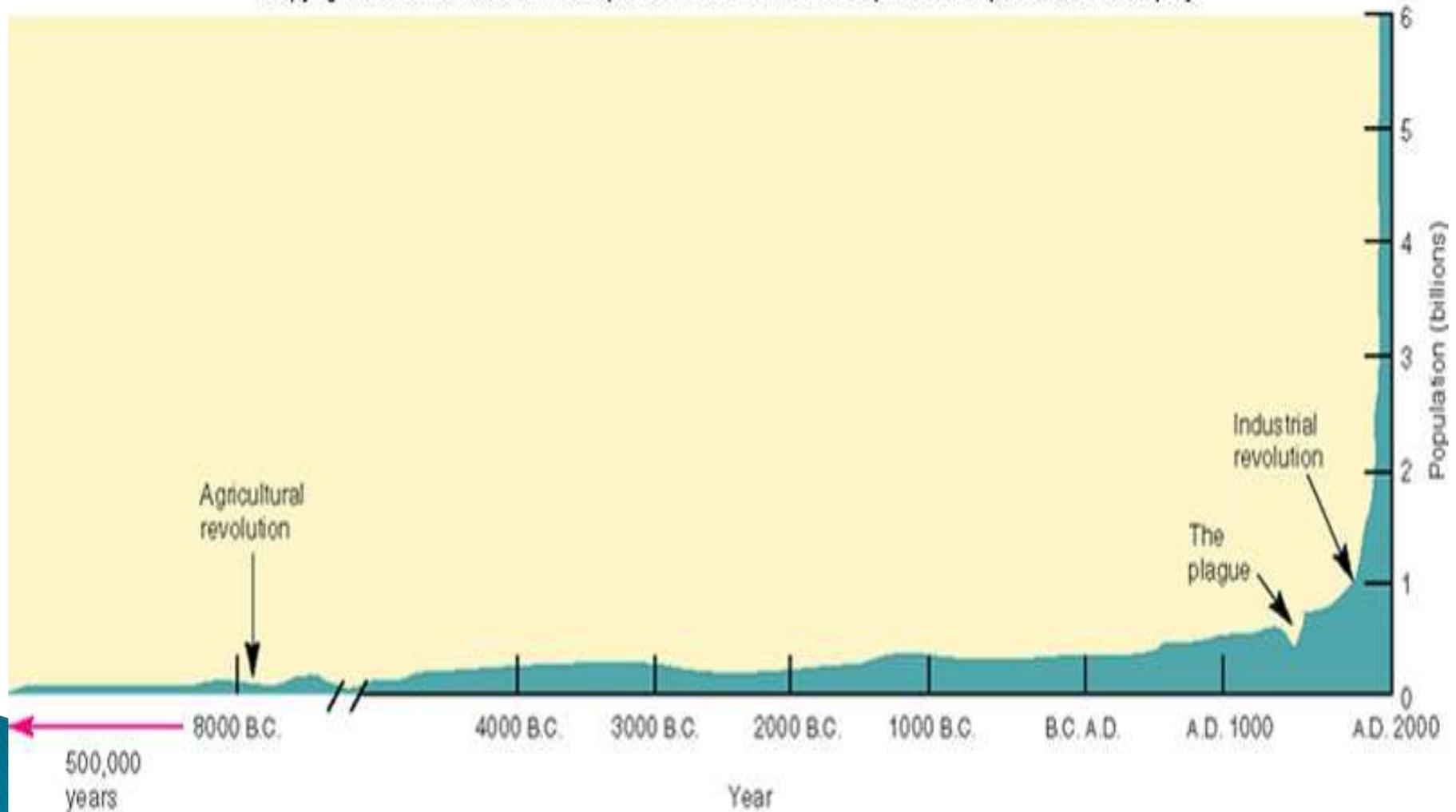
World Population Growth and Doubling Times

| Date | Population | Doubling Time |
|----------------------|-------------------|----------------------|
| 5000 B.C. | 50 million | ? |
| 800 B.C. | 100 million | 4,200 years |
| 200 B.C. | 200 million | 600 years |
| A.D. 1200 | 400 million | 1,400 years |
| A.D. 1700 | 800 million | 500 years |
| A.D. 1900 | 1,600 million | 200 years |
| A.D. 1965 | 3,200 million | 65 years |
| A.D. 2000 | 6,100 million | 51 years |
| A.D. 2050 (estimate) | 8,920 million | 215 years |

Source: United Nations Population Division.

World population trends

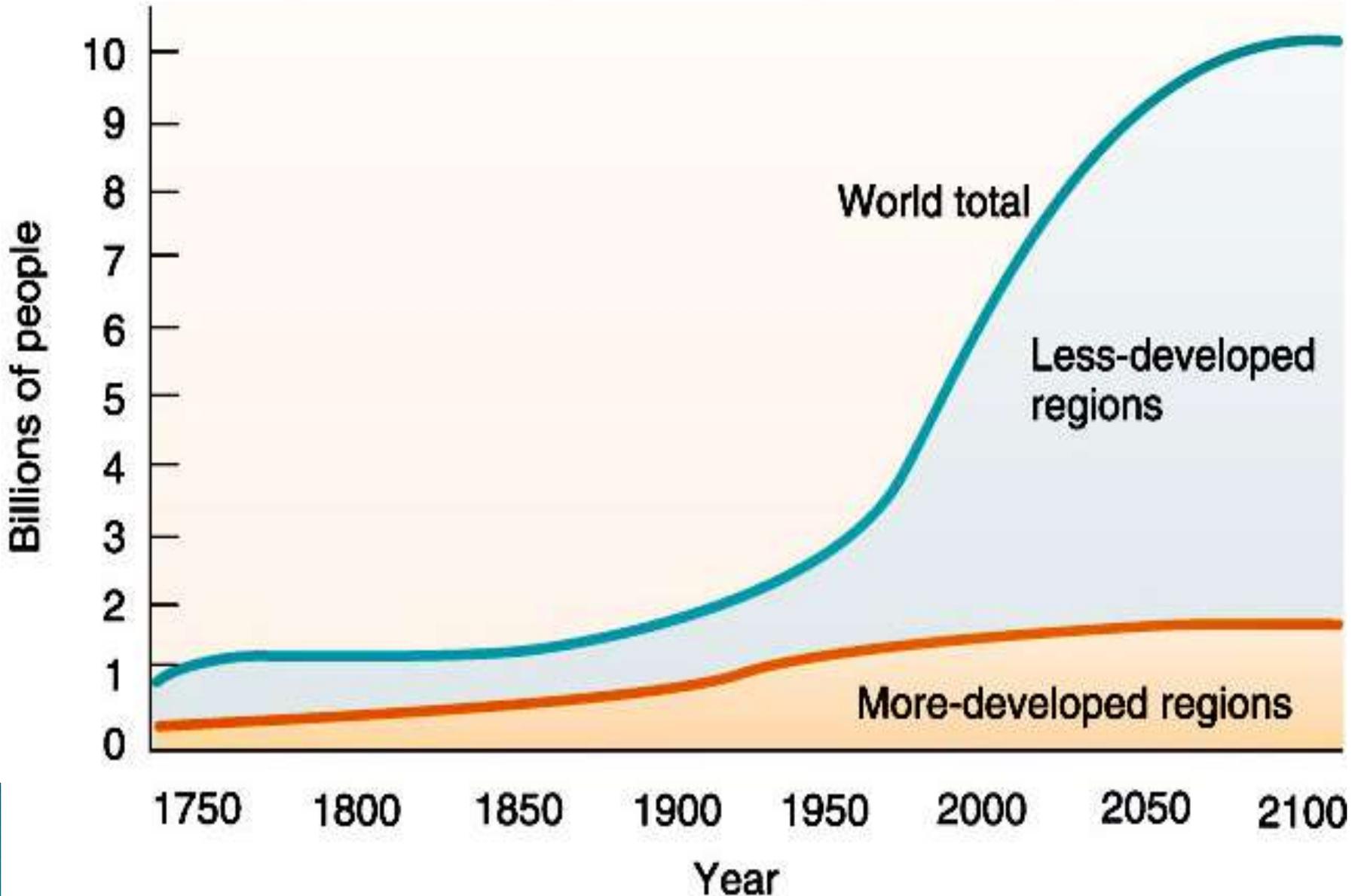
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World population trends

| Year | Population (million) | Average annual growth rate in % |
|------|----------------------|---------------------------------|
| 1750 | 791 | -- |
| 1800 | 978 | 0.4 |
| 1850 | 1262 | 0.5 |
| 1900 | 1650 | 0.6 |
| 1950 | 2526 | 1.1 |
| 1960 | 3037 | 1.79 |
| 1970 | 3696 | 1.92 |
| 1975 | 4066 | 1.89 |
| 1980 | 4432 | 1.72 |
| 1987 | 5000 | 1.63 |
| 1991 | 5385 | 1.7 |
| 1998 | 5884 | 1.6 |
| 2000 | 6054 | 1.4 |
| 2003 | 6313 | 1.1 |
| 2008 | 6737 | 1.3 |

World population trends



World population trends

- ▶ Up to 1800 AD: 1 billion
- ▶ Around 1930: 2 billion 130 years
- ▶ Around 1960: 3 billion 30years
- ▶ In 1974: 4 billion 15years
- ▶ In 1987: 5 billion 12years
- ▶ In 1999: 6 billion 12 years
- ▶ In 2025: 8 billion 26 years

TABLE 4.2

The World's Largest Countries

| 2005 | | 2050 | |
|---------------|-----------------------|---------------------|-----------------------|
| Country | Population (millions) | Country | Population (millions) |
| China | 1,304 | India | 1,628 |
| India | 1,104 | China | 1,437 |
| United States | 297 | United States | 420 |
| Indonesia | 222 | Indonesia | 308 |
| Brazil | 184 | Pakistan | 295 |
| Pakistan | 162 | Brazil | 260 |
| Bangladesh | 144 | Nigeria | 258 |
| Russia | 143 | Bangladesh | 231 |
| Nigeria | 132 | Congo, Dem. Rep. of | 183 |
| Japan | 128 | Ethiopia | 170 |

Source: Data from Population Reference Bureau, 2005.

By 2050, India will probably be the world's most populous country.

Silent features of population growth

- ▶ Approximately 95% population growth is occurring in developing countries.
- ▶ Currently 1 / 3rd of world's population is <15; when they reached to reproductive age growth rate will further increases.
- ▶ UNFPA estimates world's population will be 10 billion by 2050 and 20.7 billion by 2100.
- ▶ Fertility rate for developed, developing and least developed country is 1.6, 12.9 and 4.9 per woman respectively.
- ▶ World's population has been growing at 176 people/minute, 10564/hour, 253542/day and 92543000 /year.

Population trends of Nepal

| Year | Population | Annual growth Growth rate in % |
|---------|------------|-----------------------------------|
| 1911 | 5,638,749 | |
| 1920 | 5,573,788 | - 0.13 |
| 1930 | 5,532,574 | - 0.07 |
| 1941 | 6,283,649 | 1.16 |
| 1952/54 | 8,256,625 | 2.27 |
| 1961 | 9,412,996 | 1.64 |
| 1971 | 11,555,983 | 2.05 |
| 1981 | 15,022,839 | 2.62 |
| 1991 | 18,491,097 | 2.08 |
| 2001 | 23,151,423 | 2.25 |

Source: Central Beauro of Statistics Nepal

Population trends of Nepal

Demographic and health indicators^{##}

| | | |
|--|--------------|----------|
| Total population | 25.8 million | (2006) |
| Expectation of life at birth (ELB) (years) | 61 | (2004) |
| Birth rate / 1000 population | 28.4 | (2003/5) |
| Crude Death rate / 1000 population | 9.9 | (2001) |
| Infant mortality rate / 1000 live births | 48 | (2006) |
| Under-five mortality rate / 1000 live births | 61 | (2006) |
| Maternal mortality ratio / 100,000 live births | 28.1 | (2005) |
| Adult literacy rate > 15 years | 49 | (2004) |
| Human Development Index | 0.527 | (2004) |

'11 Health Questions about 11 SEARO countries'. WHO SEARO (2007)

Homework

- ▶ Family Planning and contraceptive devices available for birth control.





Thank You...

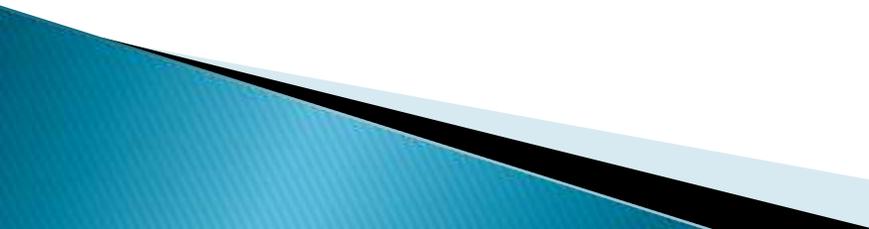
Family Planning

- ▶ The conscious effort of couples to regulate the number and spacing of births through artificial and natural methods of contraception. Family planning connotes conception control to avoid pregnancy and abortion, but it also includes efforts of couples to induce pregnancy.

Family Planning

- ▶ An expert committee of the WHO (1971) defined Family Planning as “a way of thinking & living that is adopted voluntarily, upon the basis of knowledge, attitude & responsible decisions by individual & couples, in order to promote the health & welfare of the family group & this contribute effectively to the social development of a country.”

Family planning helps individuals or couples to attain certain objectives:

- ▶ To avoid unwanted births
 - ▶ To bring about wanted births
 - ▶ To regulate the intervals between pregnancies
 - ▶ To control the time at which birth occurs in relation to the age of the parent
 - ▶ To determine the number of children in the family.
- 

Scope of Family Planning

1. The proper spacing and limitation of birth
2. Advice on sterility
3. Education for parenthood
4. Sex education
5. Screening for pathological conditions of RH
6. Genetic counseling
7. Premarital consultation and examination
8. Carrying out pregnancy test
9. Marriage counseling
10. Preparation of couple for the arrival of their 1st child
11. Providing service to unmarried mothers
12. Teaching home economics and nutrition
13. Providing adoption services

Benefit of family planning

- ▶ FP is the one of the most effective and inexpensive way of improving the present and future quality of life on earth.
- ▶ FP could save the life of $1/4^{\text{th}}$ – $1/2$ of 5,00,000 maternal deaths.
- ▶ Also prevent the damage caused by high risk and undesired pregnancies.
- ▶ Could prevent most or all 50,000 illegal abortion/day and resulting 1,50,000 death/year.

Benefit of family planning

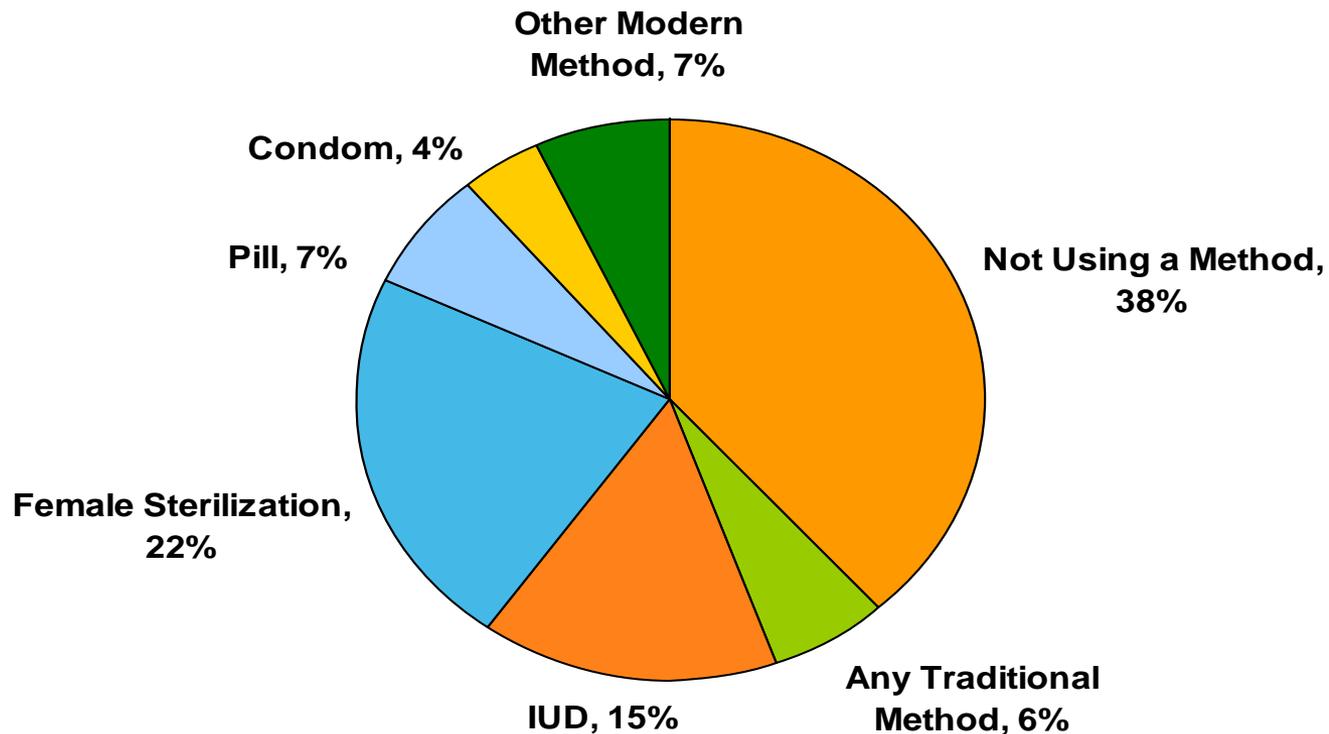
- ▶ Decrease the physical and mental exhaustion resulting from large family and poorly time pregnancy.
 - ▶ Women would have more time for: education, vocational development, income production, recreation and care of existing children.
 - ▶ Save millions of infant lives per year by reducing the number of high risk births.
 - ▶ Lead to significant improvement in infants nutrition and health.
- 

Benefit of family planning

- ▶ Decrease the number of teenage pregnancies
 - ▶ Decrease the incidence of cervical cancer
 - ▶ Decrease the incidence of sexually transmitted diseases.
- 

Family Planning Methods in Developing Countries, 2007

Married Women of Reproductive Age Using Family Planning



Source: United Nations Population Division, *World Contraceptive Use, 2009*.

Contraceptives methods

- ▶ Contraceptive methods are preventive methods to help women avoid unwanted pregnancies including all temporary and permanent measures to prevent pregnancy resulting from coitus.

Contraceptives methods

1. Spacing methods

- i. Barrier method: Physical, Chemical, combined
- ii. Intrauterine devices
- iii. Hormonal methods
- iv. Post-conceptional methods
- v. Miscellaneous

2. Terminal methods

- i. Male sterilization
- ii. Female sterilization

1. Barrier method

- ▶ Include both physical and chemical barriers.
 - Condoms (male & female)
 - Cervical barriers (diaphragm & cervical cap)
 - Spermicidal (foam, sponge)
- ▶ Work by preventing sperm from reaching an ovum.
- ▶ Only condoms provide protection against STIs.



Male Condom



- ▶ Sheath that fits over the erect penis
- ▶ The only temporary method of birth control for men
- ▶ Only form of contraception that effectively reduces STI transmission
- ▶ Made of thin latex, polyurethane, or natural membrane



Male Condom



- ▶ **Many varieties**
 - Different features, shapes, textures, colors, flavors
 - Some “extended pleasure” types have a desensitizing agent on the inside to delay ejaculation
 - Lubricated or non-lubricated
- ▶ Average shelf life of condoms is **5 years**;
- ▶ don't store latex condoms in hot places (back pocket) because heat can deteriorate the latex.



CONDOMS,
history, effectiveness & testing

How to use the male condom?

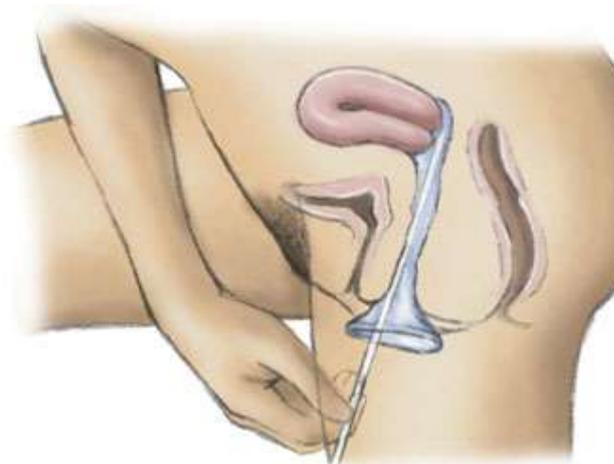
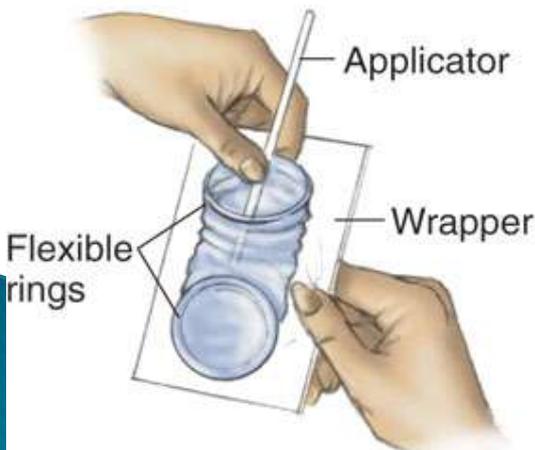
- ▶ Pinch reservoir tip of condom before unrolling condom over the penis to leave room for ejaculate which reduces chance of condom breaking.
- ▶ Unroll condom over erect penis *before* any contact between the penis and vulva occurs.
- ▶ Use a water-based lubricant to reduce risk of condom breaking (oil-based lubricants deteriorate condom).
- ▶ Hold condom at the base of the penis before withdrawing from the vagina to avoid spilling semen inside vagina.



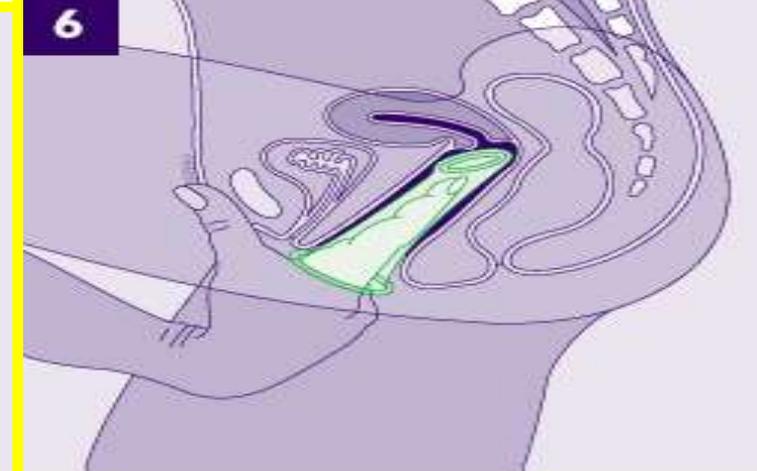
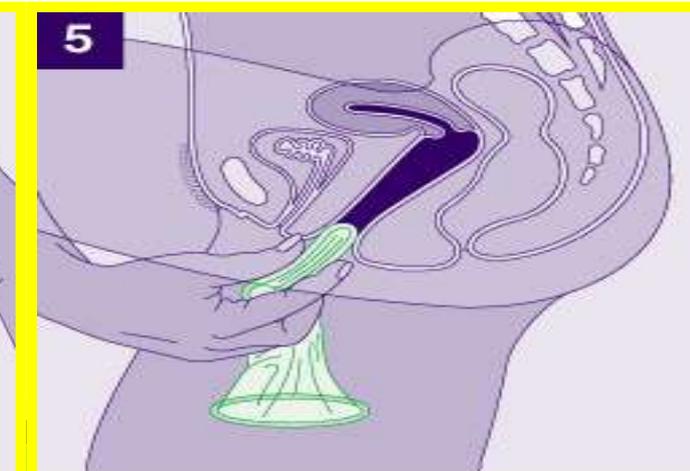
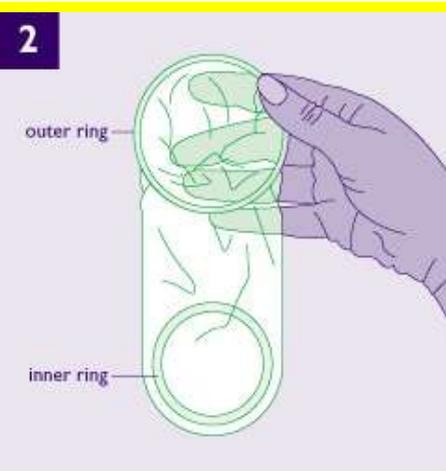
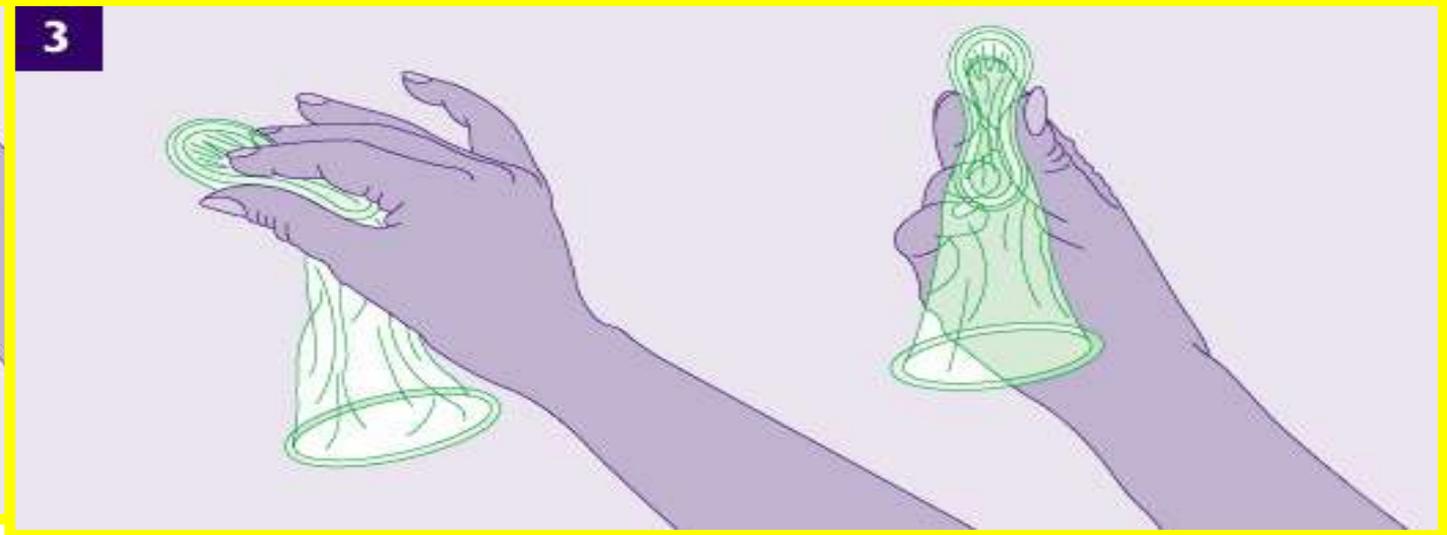
Female condom



- ▶ Consists of **two flexible polyurethane rings** and a soft, loose-fitting polyurethane sheath
 - One ring at closed end fits loosely against **cervix**;
other ring at open end encircles the **labial area**
- ▶ **Can be inserted several hours before sexual activity**; don't need to remove it immediately following ejaculation.



How to insert the female condom ?



Female Condoms



Advantages and disadvantages

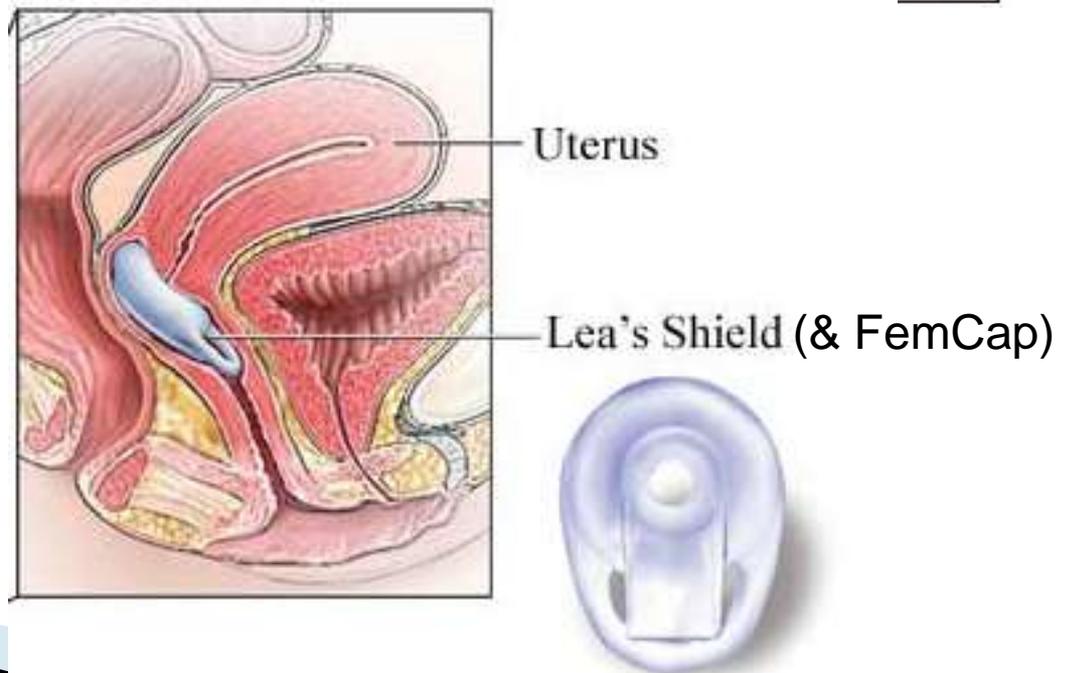
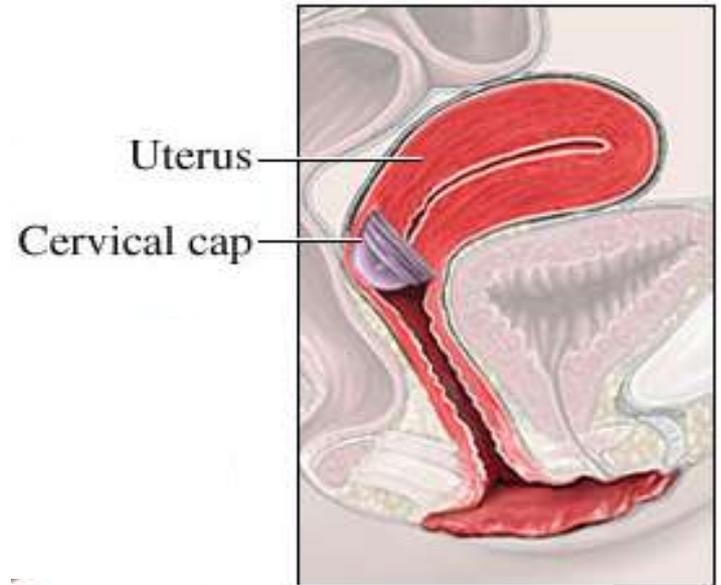
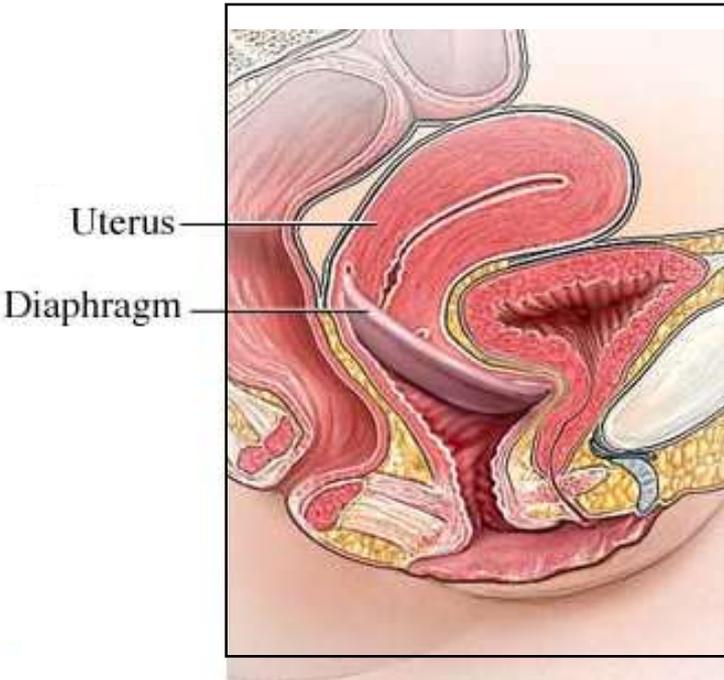
| Advantages | Disadvantages |
|--|--|
| <ul style="list-style-type: none">▪ Easily Available▪ Inexpensive▪ Easy to use▪ No side effective▪ Disposable▪ STI protection | <ul style="list-style-type: none">▪ Can reduce sensation<ul style="list-style-type: none">▪ Polyurethane transmits heat well, so some say that the female condom has less reduction in sensation▪ Interruption of sexual experience<ul style="list-style-type: none">▪ May slip off or tear out during coitus |

Cervical barrier devices

- ▶ Covering the cervix is one of the oldest methods in contraceptive history.
- ▶ **Cervical cap:** covers cervix only
- ▶ **Diaphragm:** covers upper vaginal wall behind cervix underneath pubic bone
- ▶ **Fem-cap & Lea's shield** have removal straps
- ▶ **Lea's Shield** allows a one-way flow of fluid from cervix to vagina
- ▶ Method is usually combined with spermicidal



Placement of cervical barrier devices

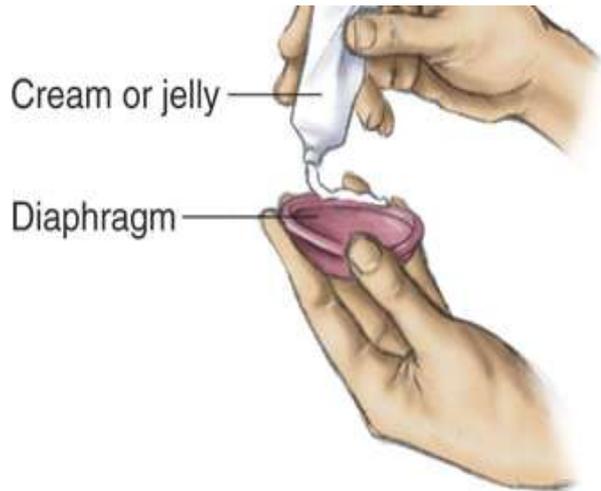




Barrier method:
The cervical cap fits snugly over the cervix, preventing sperm from entering the uterus

How to use cervical barrier devices

- ▶ Use diaphragm & cervical cap *only* with water-based lubricants b/c they are latex (FemCap & L.S. are silicone)
- ▶ Can insert up to 6–8 hr. before intercourse; should leave in at least 8 hr after

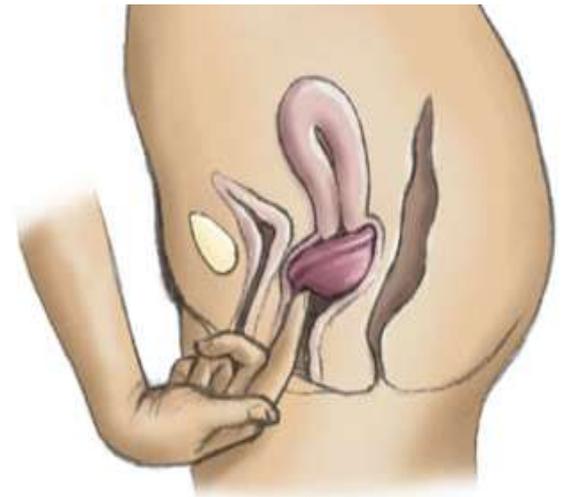


Squeeze spermicide into dome of diaphragm and around the rim.

(b)



Squeeze rim together; insert jelly-side up.



Check placement to make certain cervix is covered.

Advantages and Disadvantages

- ▶ **Advantages:** absence the risk of pregnancy and medical contraindication.
- ▶ **Disadvantages:** initially need trained health person to demonstrate the technique; may cause toxic shock syndrome if left in vagina for several hours.



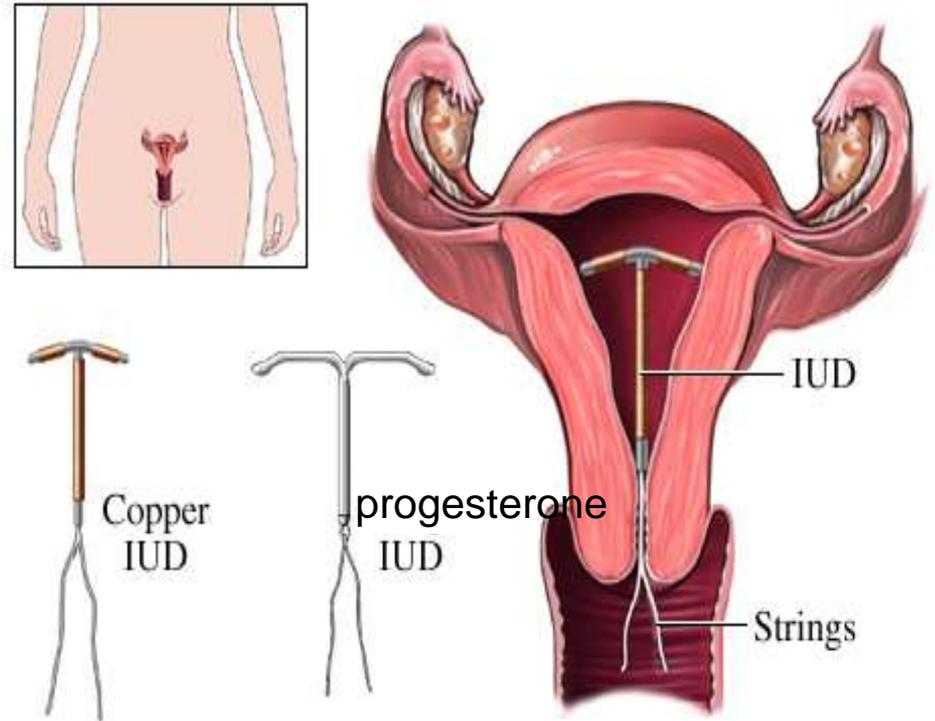
Vaginal spermicides

- ▶ **Include:** foam, sponge, suppositories, creams, film
- ▶ **Spermicidal:** chemical that kills sperm (nonoxynol-9)
- ▶ **Advantage:** no prescription necessary
- ▶ **Disadvantages:**
 - **Interruption of sexual experience** (except for the sponge)
 - **Skin irritation** (which can increase susceptibility to STI infection)
 - **No protection from STIs**
 - **Not effective enough to be used with other a condom or other method**

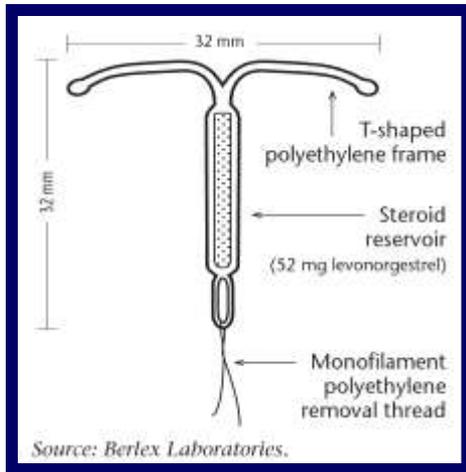


2. Intrauterine Devices (IUDs)

- ▶ Small plastic objects inserted into uterus.
- ▶ **2 types**
 - Hormone-releasing (progesterone)
 - Copper-releasing
- ▶ Have fine **plastic threads** attached that hang slightly out of cervix into vagina for removal.



IUD Mechanisms of Action



Levonorgestrel-Releasing IUD (LNG-IUS, Mirena®)

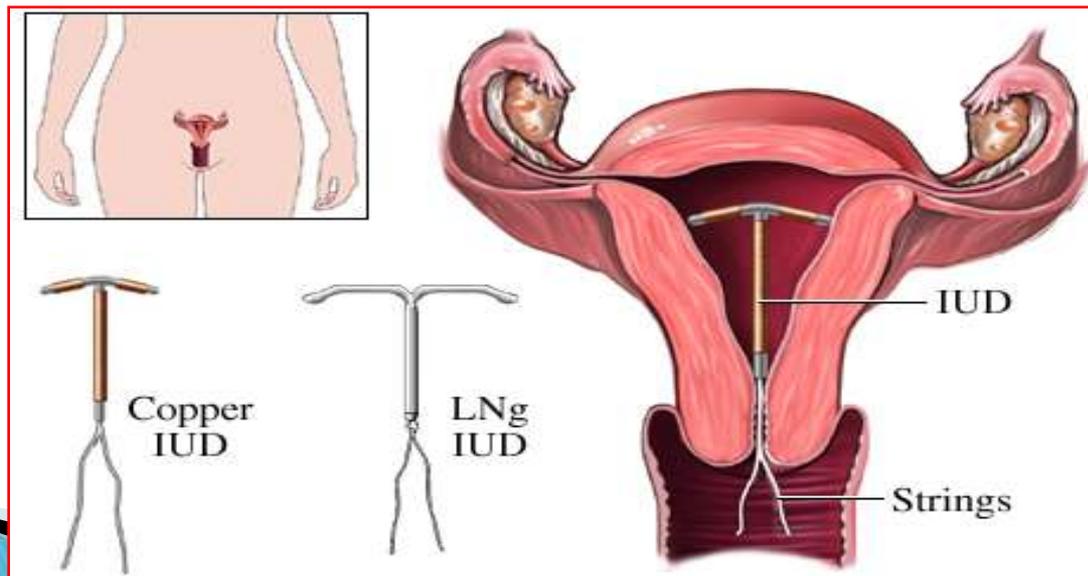
- Inhibits fertilization
- Thickens cervical mucous
- Inhibits sperm function
- Thins and suppresses the endometrium

Copper-Releasing IUD (ParaGard® T380A)

- Inhibits fertilization
- Releases copper ions (Cu^{2+}) that reduce sperm motility
- May disrupt the normal division of oocytes and the formation of fertilizable ova

Intrauterine Devices (IUDs)

- ▶ Very high continuation rate compared with other methods
- ▶ Duration
 - Copper: good for up to 10 years
 - Hormone: good for up to 5 years



Intrauterine Devices

- ▶ Bleeding and Pain
- ▶ Pelvic infection: 2–8 times higher than normal
- ▶ Uterine perforation: 1;150 to 1: 9000 insertion
- ▶ Ectopic pregnancy: 0.2/10000
- ▶ Expulsion: 12–20%
- ▶ Cancer and teratogenicity
- ▶ Mortality : 1 /100000 women – years of use
- ▶ Suspected pregnancy
- ▶ Undiagnosed vaginal bleeding
- ▶ Ca cervix, uterus
- ▶ Previous ectopic pregnancy
- ▶ Anaemia
- ▶ PIDs
- ▶ Congenital malformation of Reproductive organs

Side effects

Contraindication

Advantages and Disadvantages

▶ Advantages

- Very effective (essentially no “user error”)
- Long-term protection
- No interruption of sexual activity
- Don't have to remember to use
- Can be used during breast-feeding

▶ Disadvantages

- No STI protection
- Risk of PID (usually within first 1–2 months following insertion)
- Rare incidence of perforating uterine wall

Thank you.



3. Hormone-based contraceptives

two types hormone based contraceptives

1) Oral contraceptives Pills (OCPs)

- 1) Combined pills
- 2) Progesterone only pill (POP)
- 3) Once a month (long acting pill)
- 4) Male pill

2) Depot (slow release) formulations

- 1) Injected hormones
- 2) Vaginal ring
- 3) Transdermal patch
- 4) Hormonal IUDs

Oral contraceptives Pills (OCPs)

▶ Combined pill

- Contains both estrogen and progestin
- At present most of combined pills contain 30–35 mcg of synthetic estrogen and 0.5–1.0 mg of progesterone.
- Given daily for 21 consecutive days beginning on the fifth day of the menstrual cycle, followed by 7 days breaking during which period menstruation occurs.

▶ Progestin-only pill

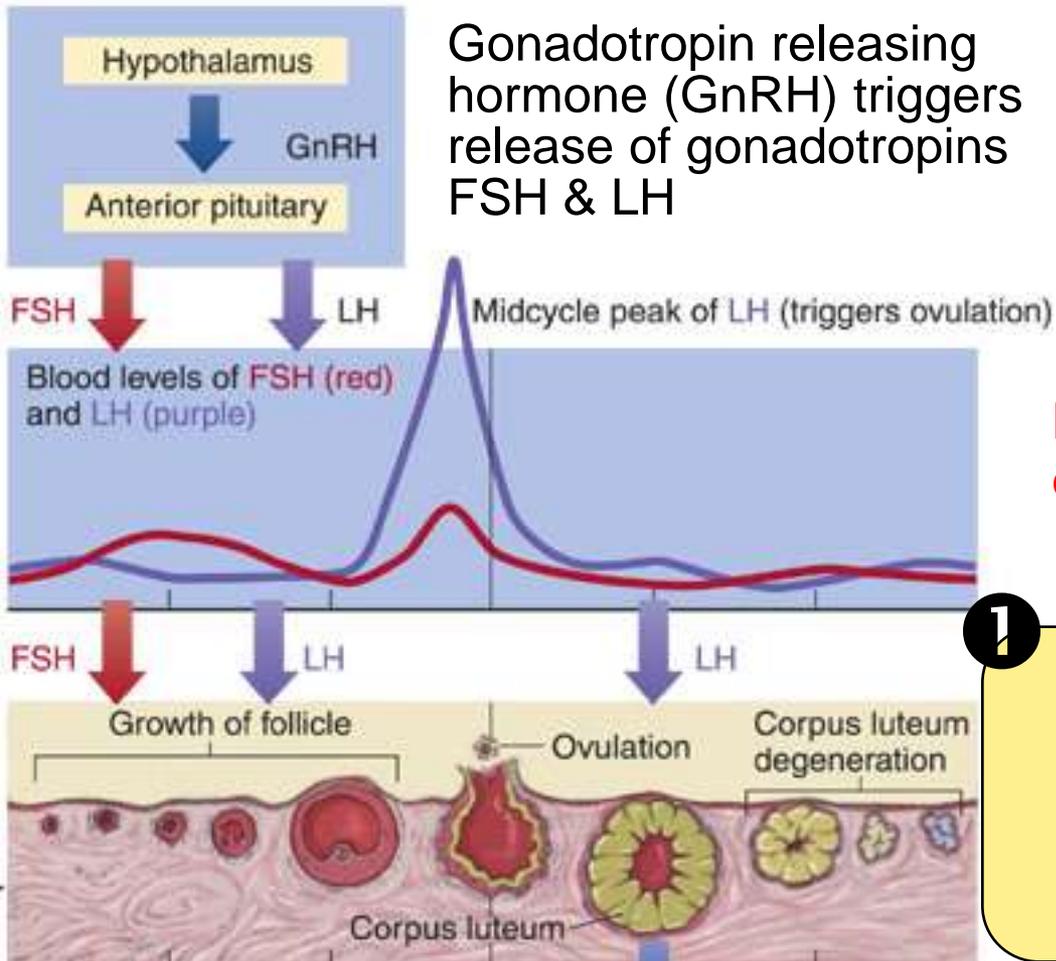
- Low dose of progestin and no estrogen
- For women who should not take estrogen (breastfeeding, high blood pressure, at risk for blood clots, smoke)

Oral contraceptives Pills (OCPs)

- ▶ **Once a month pill**
 - Contains **quinestrol**, a long acting estrogen is given in combination with a short acting progesterone.
 - High pregnancy rate and also high irregular bleeding.
- ▶ **Male pill**
 - Preventing **spermatogenesis**
 - Interfering sperm storage and maturation
 - Preventing sperm transport to vas
 - Affecting constituents of the seminal fluids
 - **Under investigation**

How hormonal contraceptives work?

Gonadotropin releasing hormone (GnRH) triggers release of gonadotropins FSH & LH



FSH & LH trigger ovulation

1

Estrogen & progesterone in hormonal contraceptives inhibit LH, FSH, and GnRH secretion, preventing ovulation

2

Progesterone also:

- thickens cervical mucus to prevent Passage of sperm into the uterus
- changes uterine lining to inhibit implantation

How to use oral contraceptives

- ▶ Different types of OCPs will differ in how to begin, and other instructions: read instructions carefully & talk with health workers
- ▶ **Don't skip pills**, regardless of whether or not you are having sex
- ▶ Take pill at the **same time each day**
 - If you miss 1 pill: take missed pill as soon as you remember, and then take next pill at the regular time
 - If you miss >1 pill: consult health care practitioner for advice; use a **backup method** for remainder of your cycle

Possible side effects & health issues

- ▶ **Women who should not take OCs:**
 - History of blood clots, strokes, heart/circulation problems, jaundice, breast or uterine cancer, liver disease
- ▶ **Women considered risky for taking OCs:**
 - Women who smoke, have migraines, depression, high BP, epilepsy, diabetes, asthma, varicose veins

Possible side effects & health issues

- ▶ Side effects of OCs can include:
 - Weight gain, decreased sexual interest, headaches, mood changes, nausea, bleeding between periods
 - May clear up after 2–3 cycles on the pill
- ▶ Rare side effect include carcinogenesis, metabolic disorder, liver disorders etc.

Depot Formulations

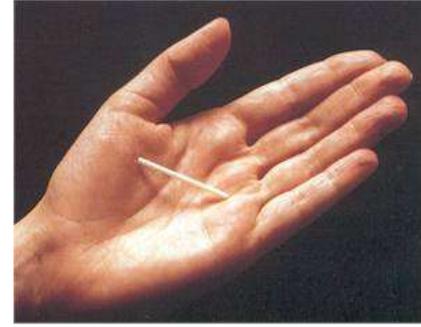


▶ Injected Contraceptives

- DMPA or Depo-Provera contains 150mg/ml Depot medroxy-progestrone acetate.
- Dose: 150mg/ml every 3 weeks.
- Constraints: no STD protection, weight gain, bleeding, mood change, frequent clinic visits.
- Takes up to 10 months for a woman to get pregnant after stopping. injections



Depot Formulations



- ▶ **Contraceptive Implants**
 - Also known as **Norplant**, 6 silicon capsule containing **35 mg levonorgestrol** each capsule.
 - Inserted under skin of upper arm
 - Progestin-only
 - Effective for up to **5–8 years**
 - No need to daily intake
 - No STD protection, weight gain, bleeding, mood change, need of surgical procedure

Depot Formulations



- ▶ **Vaginal ring**
 - 2" ring inserted into the vagina during period
 - Containing levonorgestrel.
 - Worn for 3 weeks, removed for 1 week, then replaced with new ring
 - No STD protection, not effective for all women .

Post-conception Method

▶ Menstrual regulation

- Aspiration of uterine contents 6–14 days of missed period; cervical dilation is done.
- May be uterine perforation and trauma, infertility, ectopic pregnancy etc.

▶ Abortion

- Termination of pregnancy before 28 weeks of pregnancy
- May have serious consequences including hemorrhage, trauma, uterine perforation, sepsis, infertility, ectopic pregnancy and even mortality.
- Legal aspect

Miscellaneous

Abstinence

- This is the total avoidance of sexual activity.
- It carries a 0 (zero) percent chance of getting pregnant.
- The mystery of Aspirins
- Question arising to possibilities.

Miscellaneous

Outer-course:

- ▶ Noncoital forms of sexual intimacy
- ▶ Kissing, touching, mutual masturbation, oral sex, anal sex
- ▶ Any type of sexual intimacy that avoids male ejaculation near vaginal opening
- ▶ Can be primary or temporary means of preventing pregnancy
- ▶ Can also be used when it's not advisable to have intercourse for other reasons, such as after childbirth or abortion
- ▶ No undesirable contraceptive side effects
- ▶ Does not eliminate chances of spreading STDs, especially if it involves oral or anal sex

Miscellaneous

Withdrawal/Coitus interruption

- ▶ During sex the man withdraws his penis from the vagina before he ejaculates.
- ▶ The effectiveness rate varies with the self-control of the male.
- ▶ The male must recognize he is about to ejaculate and pull out.
- ▶ With typical use about 20 out of 100 females would be pregnant after one year of using withdrawal.

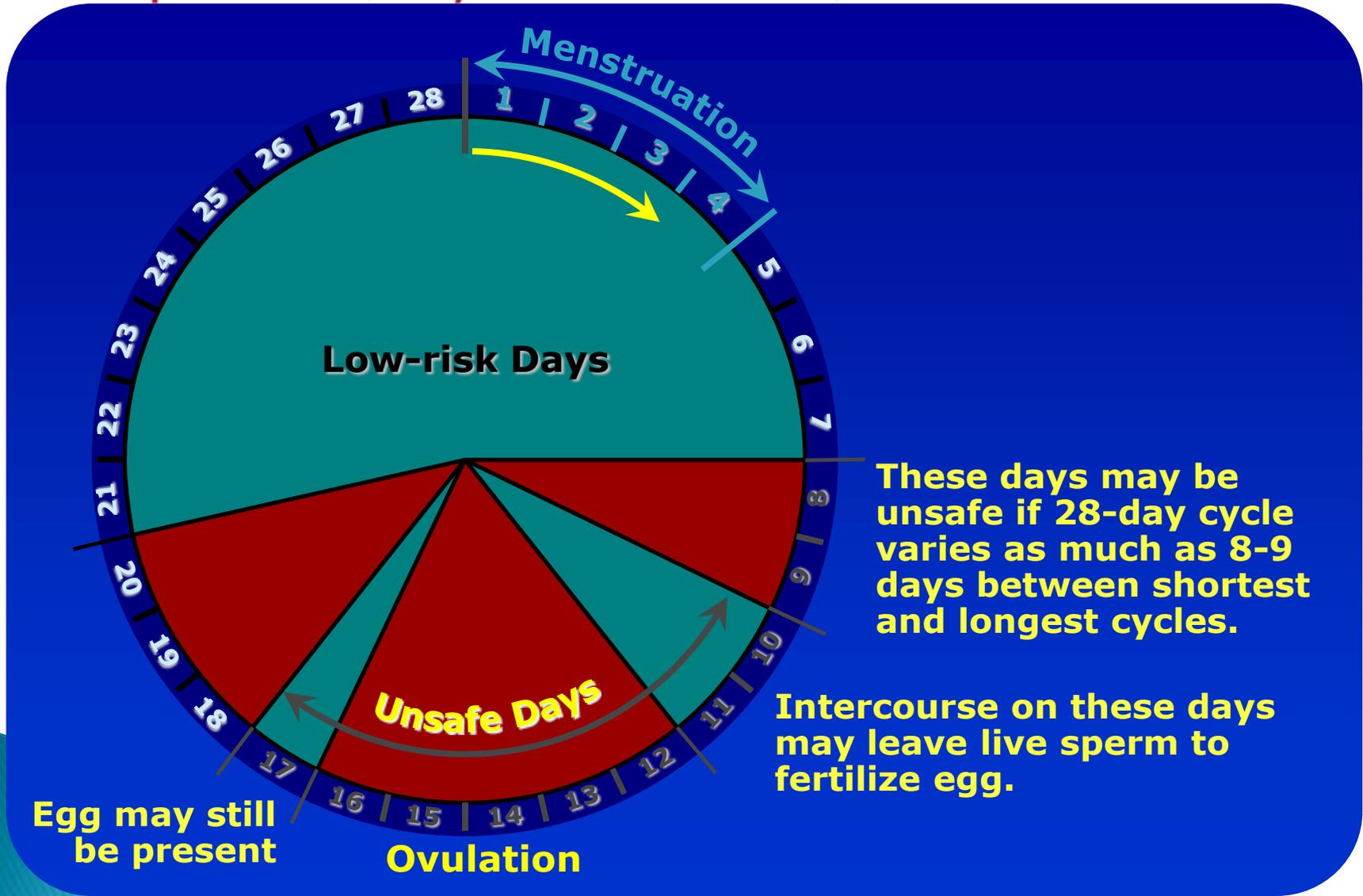
Miscellaneous

Withdrawal contd..

- ▶ Natural method that does not require devices or medicine in the body.
- ▶ There is a high rate of failure:
 - Relies on the man recognizing when he will ejaculate.
 - If semen comes in contact with the opening of the vagina the woman may become pregnant.
- ▶ Sex may not be as pleasurable for the couple.
- ▶ No protection against sexually transmitted infections.

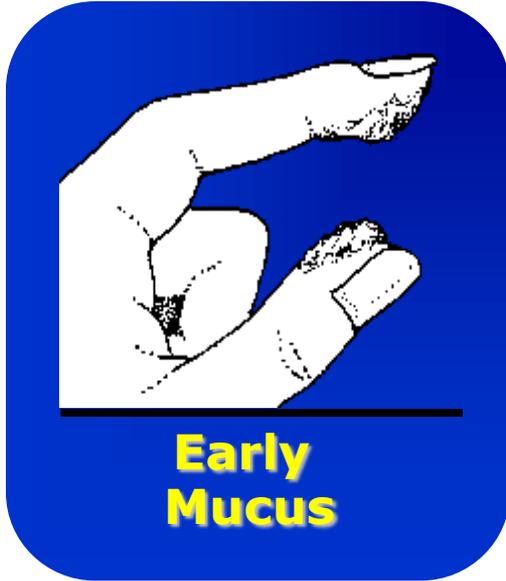
Miscellaneous

Safe period (Rhythm method)



Cervical Mucus Method

no unprotected
intercourse



- Slight amount
- Thick
- White
- Sticky
- Holds its shape



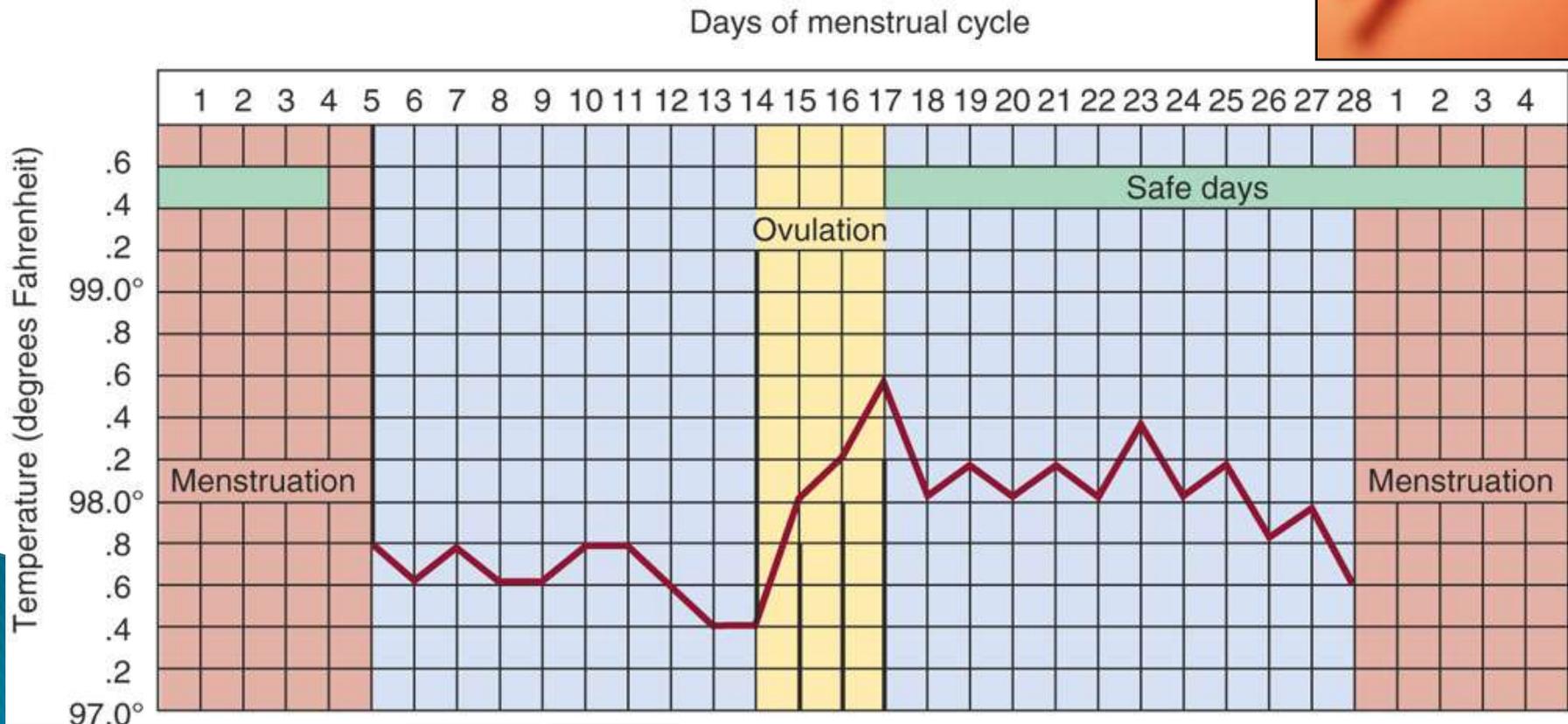
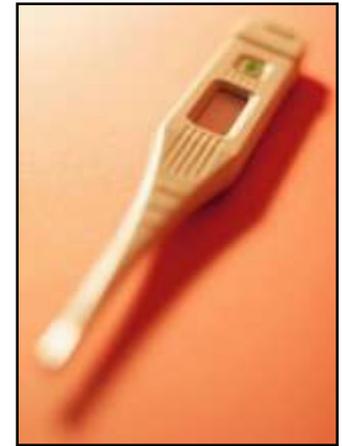
- Increasing amounts
- Thinner
- Cloudy
- Slightly stretchy



- Profuse
- Thin
- Transparent
- Stretchy

Basal Body Temperature Method

- ▶ Body temp in resting state on waking
- ▶ Slight drop immediately before ovulation
- ▶ After ovulation, release of progesterone causes slight increase in temperature



Miscellaneous

Breast feeding

- ▶ Lactation prolongs the post partum amenorrhea and provides some degree of protection
- ▶ No more than 5–10% women becomes pregnant before 1st menstruation after delivery.
- ▶ Usually before child becomes 6 months and need to frequent breast feeding.

Birth control vaccine

- ▶ Immunization with a vaccine prepared from **beta sub unit of human chorionic gonadotrophin (HCG)**
- ▶ Now in clinical trail and uncertainties are great.

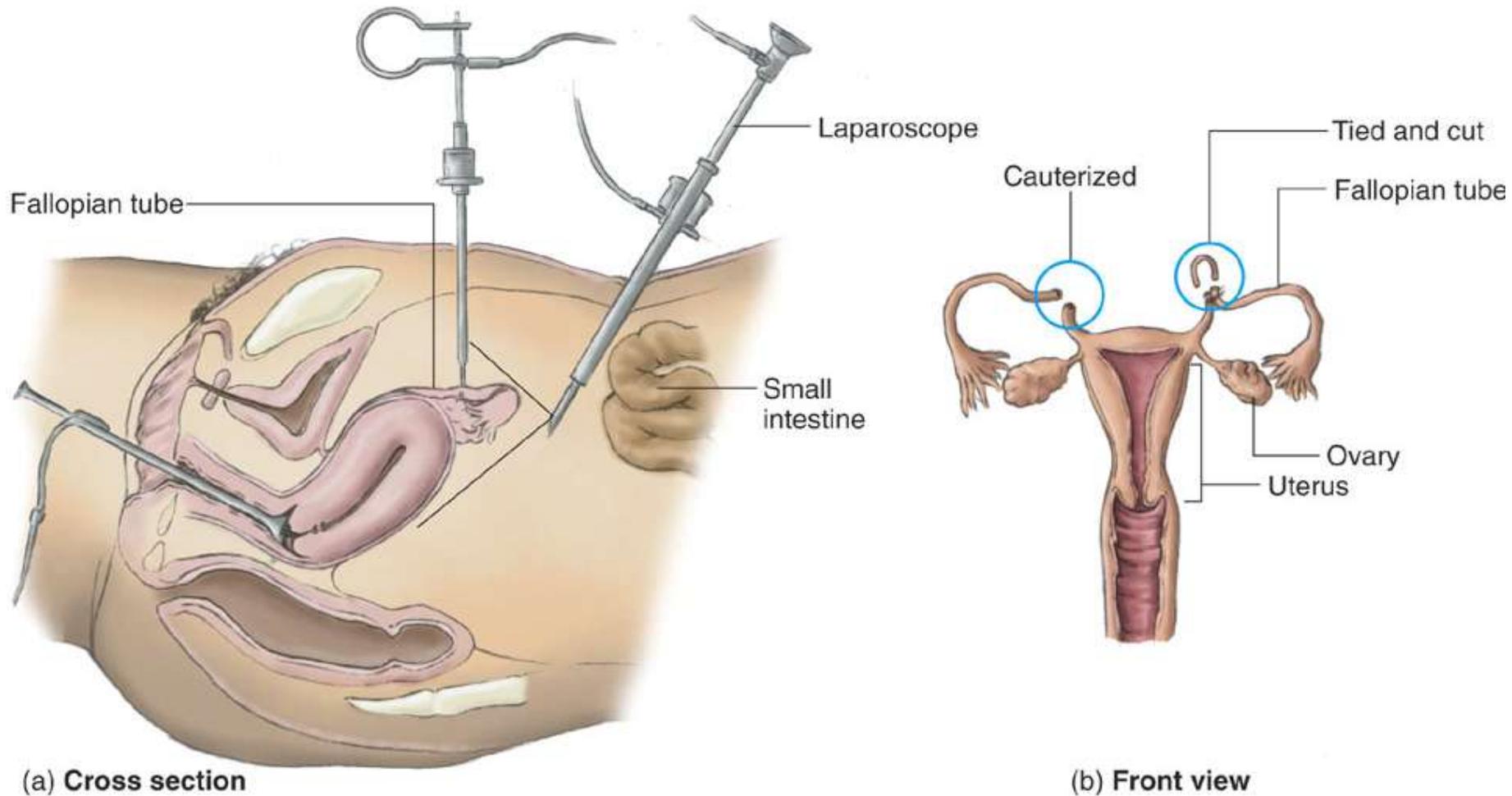
Sterilization

- Essentially permanent, although vasectomies are sometimes reversible.
- Does not affect hormones, desire, sexual functioning.
- Only one time method in life.
- Provides most effective protection against pregnancy.
- Very low risk of complication if performed according to the accepted medical standards.
- Includes vasectomy and minilap and laparoscopy .

Female sterilization

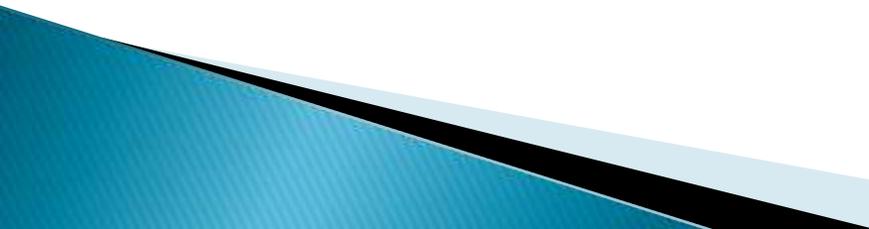
- ▶ Two procedure are most common: laparoscopy and minilaparatomy
- ▶ **Laparoscopy:** specialized instrument Laparoscope inserted through abdominal approach and fallopian tubes are blocked with clip or rings.
- ▶ **Minilap:** 2.5–3 cm incision in abdomen is done under local anesthesia and fallopian tubes cut and blocked in both sides.

Female sterilization procedure



- ▶ **Laparoscope**: narrow, lighted viewing instrument that is inserted into abdomen to locate the fallopian tubes.

Male sterilization: Vasectomy

- ▶ Simple operative procedure can be conducted even in rural PHCCs by trained junior medical officers
 - ▶ Removal of 1 cm of vas after clamping.
 - ▶ Needs backup method for at least 30 ejaculations.
 - ▶ Approximately 100% effective method.
 - ▶ Non scalpel vasectomy new technique applied today's is more effective.
- 

Male sterilization procedure

- ▶ Vas deferens on each side is cut; small section is removed, and the ends are tied off or cauterized.



(1) The vas deferens is located.



(2) A small incision in the scrotum exposes the vas.



(3) A small section of the vas is removed, and the ends are cut and/or cauterized.



(4) The incision is closed.



(5) Steps 1–4 are repeated on the other side.

Effectiveness of birth control methods

| <i>Method</i> | <i>Typical Use Rate of Pregnancy</i> | <i>Lowest Expected Rate of Pregnancy</i> |
|--|--------------------------------------|--|
| Sterilization: | | |
| Male Sterilization | 0.15% | 0.1% |
| Female Sterilization | 0.5% | 0.5% |
| Hormonal Methods: | | |
| Implant (<i>Norplant™ and Norplant™-2</i>) | 0.05% | 0.05% |
| Hormone Shot (<i>Depo-Provera™</i>) | 0.3% | 0.3% |
| Combined Pill (<i>Estrogen/Progestin</i>) | 5% | 0.1% |
| Minipill (<i>Progestin only</i>) | 5% | 0.5% |
| Intrauterine Devices (IUDs): | | |
| Copper T | 0.8% | 0.6% |
| Progesterone T | 2% | 1.5% |
| Barrier Methods: | | |

Effectiveness of birth control methods

| Barrier Methods: | | |
|--|-----|------|
| Male Latex Condom ¹ | 14% | 3% |
| Diaphragm ² | 20% | 6% |
| Vaginal Sponge (no previous births) ³ | 20% | 9% |
| Vaginal Sponge (previous births) ³ | 40% | 20% |
| Cervical Cap (no previous births) ² | 20% | 9% |
| Cervical Cap (previous births) ² | 40% | 26% |
| Female Condom w/o spermicide | 21% | 5% |
| Spermicide: (gel, foam, suppository, film) | 26% | 6% |
| Natural Methods: | | |
| Withdrawal | 19% | 4% |
| Natural Family Planning (calendar, temperature, cervical mucus) | 25% | 1-9% |
| No Method: | 85% | 85% |

Emergency Contraceptives

- ▶ **Hormonal:** 4 tablet within 72 hours of unprotected intercourse and another 4 tablet followed by 12 hours of first dose in case of combine pills containing 30–35 ug estrogen and 2 tablet with in 72 hour and another 2 tablet followed by 12 hours of first dose in case of pills containing 50 ug oestrogen.
- ▶ **IUD:** copper T is with in 5 days of unprotected intercourse.

Delivery Mechanisms



Family planning methods available in Nepal

| Short term | Long term | Permanent |
|---|----------------|-------------|
| Male condoms: Dhal, Jodi, Panther, No 1 | Norplant | Vasectomy |
| Spermicidal: Kamal Chakki | IUDs: Cupper T | Minilap |
| OCPs: Combined Pills, Nilokan White, Sunaulo gulab, Gulab chakki | | Laparoscopy |
| DMPA: Depo- Provera, Sangini | | |

Delivery Mechanisms : public sectors

- ▶ Community
 - ▶ Sub health post
 - ▶ Health post
 - ▶ Primary Health Center
 - ▶ District hospitals
 - ▶ Zonal hospitals
 - ▶ Regional/Sub-regional hospitals
 - ▶ Central hospitals
 - ▶ Family Planning Division
- 

Community level

Community:

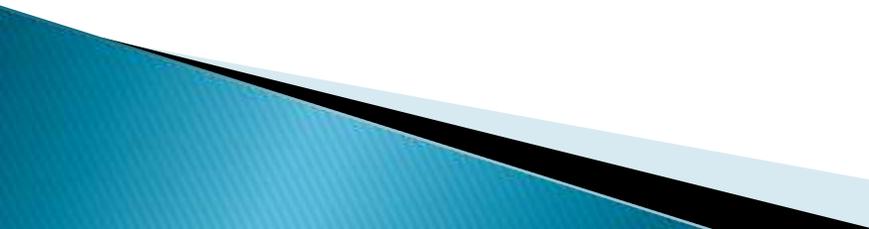
- ▶ Service provided by VHWs, MCHWs, FCHVs through home visits and PHC/ORC clinics.
- ▶ Service included are distribution of male condoms, OCPs, DMPA; referral for other methods and counseling on FP.

Sub Health Post

- ▶ Service provided by VHWs, MCHWs, and AHWs.
- ▶ Service included are distribution of male condoms, OCPs, DMPA; referral for other methods and counseling on FP.

Community level

Health post

- ▶ counseling on Family planning.
 - ▶ Service provided by VHWs, ANMs, AHWs and HAs.
 - ▶ Service included are distribution of male condoms, OCPs, DMPA.
 - ▶ Insertion of IUDs and Norplant in some HPs where trained health workers
 - ▶ Referral for terminal methods.
- 

Community level

Primary Health care:

- ▶ counseling on Family planning.
- ▶ Service provided by VHWs, ANMs, AHWs and HAs.
- ▶ Service included are distribution of male condoms, OCPs, DMPA.
- ▶ Insertion of IUDs and Norplant
- ▶ Terminal methods in some PHCs where trained medical officers.
- ▶ Otherwise referral for terminal methods.

District level

- ▶ District hospital: Service provided through MCH clinic
- ▶ Include all methods: Distribution of condoms and OCPS, Injecting DMPA, Insertion of IUDs and Norplant and Vasectomy and minilap.
- ▶ Also emergency contraception and MTP (medical termination of pregnancy).
- ▶ Mobile clinics for vasectomy and minilaps.

Zonal/Regional and National Level

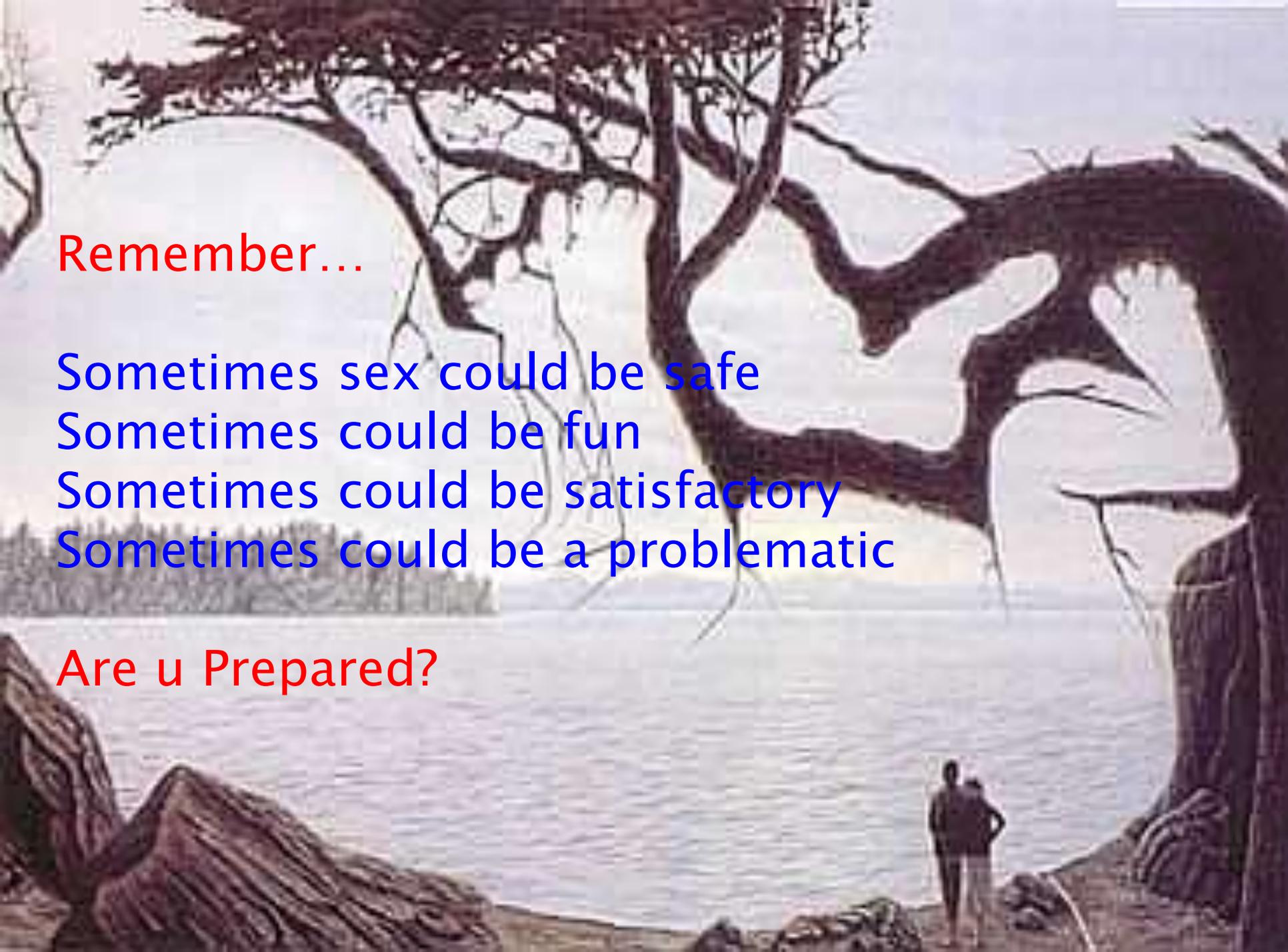
- ▶ Same as district level
 - ▶ Also recanalization facility for males in central level
 - ▶ Also other advanced facility for example management of infertility, sex education, genetic counseling in central level.
- 

Delivery Mechanisms : private sectors

- ▶ NGO/INGO/ voluntary organizations
 - ▶ Family Planning association of Nepal
 - ▶ Suaulo Pariyar Nepal/Mary Stops center
 - ▶ Nepal CRS company
 - ▶ Family Health International
 - ▶ Community Hospitals
 - ▶ Private dispensaries, Clinics, hospitals and nursing hospitals etc.
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Delivery Mechanisms : private sectors

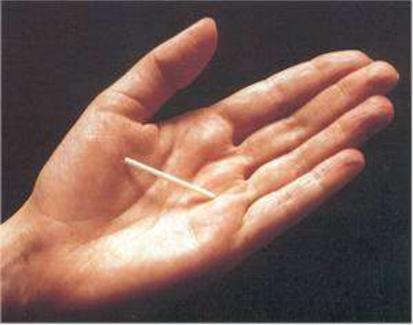
- ▶ Service provided epically with low charge
 - ▶ Service provided with their branches and sub branches.
 - ▶ Social marketing of products: condoms, OCPs, DMPAs etc.
 - ▶ Medical termination of pregnancy.
 - ▶ Emergency contraceptives production and commercial marketing
- 



Remember...

Sometimes sex could be safe
Sometimes could be fun
Sometimes could be satisfactory
Sometimes could be a problematic

Are u Prepared?



Thank You.

